

required in the treatment of fractures. This can only be obtained by setting apart wards for fractures under the care of men who devote real interest to the subject or by retaining certain institutions solely for the treatment of these cases. Gunshot injuries of the femur were "the tragedy of the war." The mortality from fractured femurs, according to Gray, who collected statistics over one of the army areas in 1916, amounted to almost 80 per cent. In 1918 Bowlby reported the mortality in field ambulances and in casualty clearing stations was reduced to less than 20 per cent. This dramatic change was due first and foremost to the proper use of the Thomas splint. Jones has taught that fracture of the femur, simple or compound, treated by a Thomas splint, should, at the worst, not yield more than half an inch of shortening; secondly, it was due to a subjugation of sepsis and gas gangrene, and, thirdly, to those accessories which prevented or lessened shock. The caliper splint should be used for some months after apparent union is procured in order to prevent angulation. In recent and in ancient fractures all joints should be kept mobile and the muscles should be regularly stimulated by electrotherapy. The restoration of functions in joints is too vast a subject to dwell upon. Forcible movements are rarely indicated. If pain occurs after manipulation and is of short duration movements may be continued. If pain persists for lengthy periods after manipulation rest is indicated. If the increased range of movement is maintained after manipulation further movement can be safely prescribed. If in spite of movements, even in the absence of great pain, the range is continually diminishing, rest is indicated.

THERAPEUTICS

UNDER THE CHARGE OF

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Severe Dermatitis during Treatment with Novarsenobillon.—LEONARD (*British Med. Jour.*, December 13, 1919, p. 773) reports a case which illustrates the risk attending the use of novarsenobillon. The patient was a soldier, aged twenty-three years, suffering from secondary syphilis. Three injections of 0.45 gram novarsenobillon and 1 gram mercury were given intravenously at weekly intervals. No reaction occurred until the fourth week of treatment, when, two days after the last injection, dermatitis and symptoms of toxemia developed. The condition did not entirely clear up until about two months after onset. The points of interest in this case are: (1) The occurrence of a severe dermatitis and toxemia after the administration of only 1.9 gram of novarsenobillon. (2) The high temperature recorded, 105° F. (3) The

simultaneous occurrence of three distinct types of eruption: maculopapular, scarlatiniform and urticarial. (4) The marked general adenitis at the onset, present before the lesions, other than the scalp, had become pustular. (5) The negative Wassermann reaction of October 8; that on July 24, before treatment commenced, being strongly positive.

A Clinical Analysis of Influenza Cases.—BLUMGARTEN and VOSS (*New York Med. Jour.*, January 24, 1920, p. 146) give the following conclusions regarding the recent (1918) pandemic of influenza. The severe cases were complicated by pneumonia, usually bronchopneumonia. They did not find the influenza organism in the blood or sputum in most of the cases (over 100) examined. Most of the severe cases, complicated with pneumonia, showed a disreptococcus in the sputum resembling the *Streptococcus hemolyticus*. They believe that the pneumonia was due to an infection with a secondary organism, such as the streptococcus or staphylococcus, the infection with the former type of organism usually being fatal. A persistent temperature of 105° F. or over was usually a bad prognostic indication. The white blood cell and differential counts were the best prognostic signs. A leukopenia and high polynuclear count usually meant a bad prognosis. The three principal causes of death were (a) cardiac failure; (b) acute pulmonary edema; (c) hemolysis. The autopsy findings showed evidences of general infection, with parenchymatous degeneration of the viscera and infarcts in the spleen and other viscera.

A New Germicide for Use in the Genito-urinary Tract—"Mercurochrome-220."—YOUNG, WHITE and SWARTZ (*Jour. Am. Med. Assn.*, 1919, lxxiii, 1487) give a preliminary report of experiments and clinical studies with mercurochrome-220 in genito-urinary infections. They conclude that: (1) Mercurochrome-220 is experimentally a drug of great germicidal value, a solution of about 1 to 1000 killing *Bacillus coli* and *Staphylococcus aureus* in urine in one minute. It has practically fifty times the germicidal strength of acriflavin in urine medium for exposures of one hour. (2) In a strength of 1 per cent. the new drug is tolerated by the human bladder for from one to three hours without irritation. Injections of 1 per cent. solution into the renal pelvis are likewise free from pain even when held *in situ* by plugging the catheter. (3) That mercurochrome-220 has a remarkable germicidal value is shown by the rapid sterilization accomplished in a series of cases of cystitis and pyelitis of long standing and refractory to other treatments. The rapidity with which a few cases of old, purulent cystitis disappeared was surprising, becoming free of pus and bacteria in a few days. (4) Studies of the comparative value of acriflavin and mercurochrome-220 in gonorrhea are not yet complete, but it has been demonstrated that with both drugs methods of great value in the treatment of the disease have been produced. (5) Mercurochrome-220 has proved to be eminently satisfactory in the treatment of chancroids and as a dressing for buboes after incision. Other drugs developed along the same lines have been produced and are being experimented with by them.

The Specific Treatment of Hay Fever.—RUCKEMANN (*Boston Med. and Surg. Jour.*, 1920, clxxvii, 295) says that the results of treating 91 cases of fall (rag-weed) hay fever was as follows: Nearly 9 per cent. of patients were entirely freed from their symptoms; 62 per cent. were moderately relieved. Of the remaining 28 per cent., about one-third showed no relief at all. The best results were apparently obtained with a moderate amount of specific treatment, since in these cases even after considerable preparation the tolerance for rag-weed pollen extract still remains at a very low level. Systemic reactions occurred after 2 per cent. of individual injections and were not always due to an overdose. The author believes that in view of the fact that so few of the postulates of experimental anaphylaxis hold good of hay fever, it is probable that hay fever depends on a mechanism which is not anaphylactic but which is perhaps closely associated with that of drug idiosyncrasies.

Acidosis in Nephritis.—CHACE and MYERS (*Jour. Am. Med. Assn.*, 1920, lxxiv, 641) state that the subject of acidosis in nephritis is one of such practical importance that it deserves emphasis from the clinical point of view. They cite observations on acidosis in nephritis in 20 fatal cases, all showing marked nitrogen retention. They found in all a severe acidosis, sufficient in many instances to be the actual cause of death. The part played by acidosis in clinical symptoms of so-called uremia is difficult to tell. Patients with pronounced acidosis present a somewhat different clinical picture from that of uremia. They were able to obtain quite definite clinical results by infusions of sodium bicarbonate solutions. They advocate the determination of the degree of acidosis by the determination of the carbon dioxide combining power of the blood plasma by the Van Slyke method, which method, furthermore, should control the administration of the alkali. They found that in certain cases of acute nephritis and acute exacerbation of chronic nephritis the distress was apparently due to the acidosis, since the judicious use of sodium bicarbonate resulted in general clinical improvement. With the rise in the carbon-dioxide-combining power of the blood the dyspnea and hyperpnea disappeared.

Sodium Chloride Diuresis.—POLAG (*Schweiz. med. Wchnschr.*, 1920, i, 29) calls attention to the fact that sodium chloride has long been known as a powerful diuretic, and he has used it for this purpose as a last resort in advanced nephritis. He confines its use practically to desperate cases. He gives a few cases showing striking benefit following a period of considerable times on a salt-free diet. He believes that when no benefit has been realized from the salt-free diet, giving a single large amount of salt during one day or three days during the week, may induce such a diuresis that considerable clinical improvement results. He states that we have no means of knowing at present which cases will respond favorably to this plan of treatment and which will be aggravated by it. Its use is comparable to the ingestion of large amounts of water used as a diuretic in kidney insufficiency.